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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,763

12/07/2005

Satoru Shiraki

126120

7522

25944 7590 03/13/2008

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EXAMINER

JAGAN, MIRELLYS

ART UNIT

PAPER NUMBER

2855

MAIL DATE

DELIVERY MODE

03/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/559,763	SHIRAKI ET AL.	
	Examiner	Art Unit	
	Mirellys Jagan	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0058920 to Lyle in view of U.S. Patent 5,733,044 to Rose et al [hereinafter Rose].

Lyle discloses a temperature sensor for an engine system, the temperature sensor comprising:

a bottomed tubular holder/sensing part (22) having an opening;

a temperature detecting device (36), contained in a bottom part of the holder, having a lead pair (37) connected thereto so as to be introduced from the opening side;

a filler resin part/device protecting part (polyphenylene sulfide resin 40) filling the holder so as to seal the temperature detecting device and extending to the opening; and

a guide part (above 22), projecting from an edge of the opening in the holder, guiding the leads constituting the lead pair;

wherein the resin is made of one kind of resin; the holder is constituted by a resin; and the temperature detecting device is covered only with a device protecting part constituted by the holder and the filler resin part (see figure 2).

Lyle does not disclose the sensor comprising a sensor cover comprising a cap part covering the whole opening, and a neck part extending from the cap part in a direction generally parallel to the opening of the bottomed tubular holder; the cap part and the neck part being integrated together; the sensor cover covering the guide part, and the guide part having a T-shaped form including a part extending in a direction perpendicular to an extending direction of the holder and a part extending parallel to the extending direction of the holder; and the resin being made of different resins.

However, Rose discloses a temperature sensor comprising a temperature sensing device in a housing, wherein the housing has a plastic sensor cover comprising a cap part (261) covering the whole opening, and a neck part (16/17) extending from the cap part in a direction generally parallel to the opening of the bottomed tubular holder, i.e., generally parallel to the extending direction of the holder. The cap part and the neck part being integrated together. The sensor

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cover provides a means of securely attaching the housing to an automotive engine system whose temperature is being measured (see figures 1 and 2).

Therefore, referring to claim 1, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the temperature sensor of Lyle by adding a cap to the housing as taught by Rose in order to securely attach the temperature sensor to the part of the engine system whose temperature is being measured.

Referring to claim 2, by adding the cover taught by Rose to the temperature sensor of Lyle, the cover with also cover the guide part.

Referring to claim 3, the shape of the guide part claimed by applicant, i.e., T-shaped, is only considered to be obvious modifications of the shape or configuration of the guide part disclosed by Lyle as the courts have held that a change in shape or configuration without any criticality is within the level of skill in the art since the particular shape claimed is nothing more than one of numerous shapes that a person having ordinary skill in the art would have been able to provide using routine experimentation based on its suitability for the intended use of the invention. See *In re Dailey*, 149 USPQ 47 (CCPA 1976). Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the guide part of Lyle by making it T-shaped so as to provide a desired shape that will guide the leads and keep them separated from each other.

Referring to claim 5, the manner of forming the cover is not germane to the issue of patentability of the apparatus itself. Therefore, this limitation has not been given patentable weight.

Referring to claim 7, the particular type of material used to make the resin, i.e., different kinds of resins, is only considered to be the use of a preferred or optimum material out of a plurality of well known materials that a person having ordinary skill in the art at the time the invention was made would have been able to provide based on the intended use of applicant's apparatus, i.e., suitability for the intended use of applicant's apparatus. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the sensor disclosed by Lyle and Rose by making the resin of different kinds of resins so as to seal the sensor in the housing, and to provide the necessary thermal conductivity to the sensor to satisfy the desired accuracy of the device, as suggested by Lyle, e.g., paragraph 22, last 4 lines. See *In re Leshin*, 125 USPQ 416 (CCPA 1960), where the courts held that a selection of a material on the basis of suitability for intended use of an apparatus would be entirely obvious.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lyle and Rose, as applied to claims 1-3 and 5-10 above, and further in view of JP 11-023379 to Morishita et al [hereinafter Morishita].

Lyle and Rose disclose a sensor having all of the limitations of claim 4, as stated above in paragraph 3, but are silent as to the manner in which the cover is engaged with the housing, and therefore, do not explicitly disclose an edge of the opening of the holder being formed with a substantially annular hook part projecting to the outside of the holder, wherein the hook part engages at least a part of the sensor cover.

However, Morishita discloses that a cover can be attached to a temperature sensor housing by forming a substantially annular hook part on the housing projecting to the outside of

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the holder for engagement with the cover. Such engagement means allow the cover to be removably attached to the housing (see figure 1).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sensor of Lyle and Rose by adding hooks to the housing in order to removably attach the cover, as suggested by Morishita. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the sensor of Lyle and Rose by placing the hooks on an edge of the opening of the holder since the location of the hooks claimed by applicant is considered to be nothing more than a design choice since this location is nothing more than one of numerous locations on the housing that a person having ordinary skill in the art at the time the invention was made would have been able to provide using routine experimentation in order to removably attach the cover to the housing as already suggested by Morishita.

Allowable Subject Matter

5. Claims 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or suggest the following in combination with the remaining limitations of the claims:

A temperature sensor wherein the neck part is extending from the cap part in a direction substantially perpendicular to the extending direction of the holder (claim 11); or wherein the lead pair extending substantially vertically from the filler resin part is bent at substantially right angles toward the guide part (claim 12).

Response to Arguments

7. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is (571) 272-2247. The examiner can normally be reached on Monday-Friday from 12PM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gail Verbitsky/
Primary Examiner, Art Unit 2855

MJ
February 25, 2008